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MAXIMISING VALUE THROUGH INTELLIGENT WELLS

25-28 July 2010 • Miri Marriott Resort & Spa, Miri, Sarawak, Malaysia

Workshop Description

Intelligent wells and completions have been around for 10+ years in the Petroleum industry. As with any new technology, the uptake was slow initially, but the number of installations has been growing fast globally and the total number of installation worldwide is estimated to be in excess of 900.

Intelligent wells have generally been seen as being expensive and more applicable in high cost environments due to the higher equipment costs and additional installation times compared to a conventional completion. However, this is beginning to change as oil companies start to evaluate fully based on entire life cycle costs (Capex & Opex) and ensure the functionality is fit for purpose to manage the key reservoir uncertainties. The value can be generated by intelligent completions both during the early life of the well (e.g. ensuring effective clean-up of all zones) as well as throughout the life cycle (e.g. optimizing production, quickly responding to rapid changes of well conditions, greater subsurface understanding).

Intelligent wells can provide a variety of different functionalities (eg. providing P, T, Q data, remote control of downhole equipment) and therefore the completions need to be designed to manage the specific reservoir challenges and uncertainties. Appropriate modelling of intelligent wells in reservoir simulators is an important part of defining the well design requirements. The range of functionalities is evolving as the technology improves/develops and new applications are being identified.

Workshop Objectives

The objective of the workshop is to enable operators, service companies and other organizations understand how the intelligent wells are being used currently and to understand the challenges and future technology needs, including use in lower cost environments. In addition, it provides the opportunity for sharing of best practices related to building a business case for the use of intelligent wells for a field development plan, effectively modelling of intelligent wells in reservoir simulations, managing the interfaces during the construction phases, managing the volumes of data from intelligent wells and how to ensure incremental return on investment.

Workshop Focus

The workshop will focus on the latest applications of intelligent wells and the best practices that can be considered during the design, installation and operating phases, as well as providing excellent networking opportunities for current and future technology exchanges.

The agenda includes the following:

- Completion strategies
- Intelligent Well Applications including low cost environment
- Measurements
- Reservoir management using Intelligent wells
- Data management –What to do with it all ?
- Reservoir simulation using Intelligent wells
- Multidiscipline teams and overcoming obstacles
- Technology requirements for the future

Who Should Attend

The workshop will be of particular interest to active practitioners or key service providers. The Applied Technology Workshop (ATW) is meant for experienced individuals who will actively share their own case histories and experience and will actively contribute to the discussion.

REGISTRATION DEADLINE: 25 JUNE 2010

EARLY BIRD REGISTRATION DEADLINE: 25 MAY 2010

REGISTER EARLY TO SAVE US\$100!

MAXIMISING VALUE THROUGH INTELLIGENT WELLS**Preliminary Workshop Timetable****Sunday, 25 July 2010**

0930-1230 hours	Programme Committee Meeting
1400 hours	Hotel Check-in
1630-1830 hours	SPE Registration
1730-1830 hours	Discussion Leaders and Session Managers/Moderators Briefing
1900-2100 hours	Welcome Reception/Dinner

Monday, 26 July 2010

0700-0830 hours	Breakfast
0830-0930 hours	Session 1: Introduction/Opening/Keynote Addresses
0930-1000 hours	Group Photo/Coffee Break
1000-1200 hours	Session 2: Intelligent Completion Strategies This session covers present completion examples where the completions were or are designed and installed with no planned interventions. The session will address the following: <ul style="list-style-type: none"> • Strategies to achieve completion reliabilities along with completion • Completion examples where intervention are planned for life of well reliabilities
1200-1300 hours	Lunch
1300-1500 hours	Session 3: Intelligent Well Technology This session will discuss about present Intelligent Well Technologies as well as non proven field trials being applied within the industry. The session subtopics include: <ul style="list-style-type: none"> • The value of the technology in reliable completion installation • The installation method for wells that are outside the deployment window from ERD wells to well control issues
1500-1530 hours	Coffee Break
1530-1730 hours	Session 4: Low Cost Environment – Break the Cost Paradigm Smart wells are not just for the high cost environments. What completions are being installed in marginal field and/or non conventional wells development? What can the high cost environment learn from these completions? This session will address the following: <ul style="list-style-type: none"> • Marginal field Applications • Non-conventional Well Development
1930-2130 hours	Group Dinner

Tuesday, 27 July 2010

0700-0830 hours	Breakfast
0830-1000 hours	Session 5: Measurement I This session will discuss the various options for measurement in subsea intelligent wells, flow measurement and control; as well as the future of intelligent well technology. <ul style="list-style-type: none"> • Measurement in subsea intelligent wells <ul style="list-style-type: none"> - Downhole reservoir and production data in subsea wells are far more critical than conventional dry-tree wells due to expensive intervention cost. What are the limitations and challenges in today subsea completion design, subsea architecture and infrastructure to enable the full range of reservoir monitoring covering P, T and Q and well control? How is the latest technology addressing this issue? And how is the industry adopting this technology and changes? • Flow measurement and control <ul style="list-style-type: none"> - Options available for flow measurement and their effectiveness - Options associated with flow control; best type of completion to ensure success, what type of completion methods need an intervention (e.g. wireline) or can be controlled from the surface? • The future of intelligent well technology. <ul style="list-style-type: none"> - Today we have the P/T sensors, flow and fraction meters, DTS, seismic, multipoint temperature sensors for reservoir monitoring; what is coming up and how will the new technology address the ever increasing demand for reservoir monitoring?
1000-1030 hours	Coffee Break

MAXIMISING VALUE THROUGH INTELLIGENT WELLS**Preliminary Workshop Timetable (Con't)****Tuesday, 27 July 2010**

- 1030-1300 hours **Session 6: Intelligent Wells Reservoir Management in 2010 and Beyond**
This session will discuss the current status of intelligent wells and the visions for the future. This session sub-topics include:
- The ability to monitor and control the reservoir. What is available today?
 - Reservoir Management - Closing the Loop from Data Acquisition to Taking Action (*Long-term reservoir management*)
 - Production Optimization - Real time (day to day basis) Reservoir Management
 - Comparison of planned and actual value being generated by Intelligent wells
 - Case histories of reservoir management.
- 1300-1400 hours Lunch
- 1400-1500 hours **Session 7: Data – What to do with it all?**
This session will address the following issues:
- Data management issues – how to handle the volume of data being transmitted from the reservoir?
 - Distribution of data - why each discipline is looking from a different point and what they really want?
 - System reliability and how to obtain the true value of the increasing amount of data being produced?
 - Current advancements in technology available for transmission and processing of the increasing amount of data being produced.
- 1500-1515 hours Coffee Break
- 1515-1600 hours **Session 7: Data – What to do with it all? (Con't)**
- 1600-1800 hours **Session 8: The Multidiscipline Team**
This session will discuss the dynamics of the multidiscipline team, and address the following:
- Bringing the team together and planning
 - What value is gained by each discipline when using the technology?
 - The importance of getting buy in from each discipline before you try to embarking on a project and the consequences of not
 - Managing the conflicting requirements and objectives of different disciplines
 - The challenge of installing complex intelligent completions vs. simple and minimal completions
 - Reduced well costs vs. greater life cycle operating costs and risk
 - Overcoming the obstacles
 - Developing a strong business case for using Intelligent Completions.
- 1900-2100 hours Group Dinner

Wednesday, 28 July 2010

- 0800-1000 hours **Session 9: Reservoir Simulation**
This session will address the following issues:
- Are today's tools being fully utilised to model Intelligent completions when analysing reservoir risk / uncertainty ?
 - What is the best way to model different types of intelligent completions (e.g. inflow control valve, inflow control device)?
 - Does better modelling of intelligent wells improve well planning or placement?
 - Discussion on latest simulation techniques. (Software packages, techniques)
- 1000-1015 hours Coffee Break
- 1015-1145 hours **Session 10: Measurement II**
This session will address the various options for measurement, particularly in the following areas:
- Intelligent Completions in extended reach horizontal well
 - The success and failures, lesson learned, and way forward
 - What is the difference between ER wells and any other completion?
 - 20-30 zone wells.
 - Quantitative vs. Qualitative Measurements.
 - What tools are currently available and how do the results compare? This could bring some light to the benefits of each side and help the decision making process on when and what to use
 - New Completion techniques and practices to accommodate these measurement practices.
- 1145-1315 hours **Session 11: Break out Session/Group Discussion**
- 1315-1345 hours **Session 12: Summary & Wrap-up**
- 1345-1445 hours Lunch
- Afternoon Rest & Recreation/Networking Opportunities/Hotel Check-Out

Sponsorship Information

Sponsorship support helps offset the cost of producing workshops and allows the Society of Petroleum Engineers (SPE) to keep the attendance price within reach of operations-level individuals, those who benefit most from these technical workshops.

The sponsorship will provide an excellent opportunity for publicity efforts as well as networking with International workshop participants. Sponsors benefit both directly and indirectly by having their company names associated with a specific workshop.

While any type of commercialism is prohibited within the meeting room, SPE recognizes that sponsoring companies offer valuable information to attendees outside the technical sessions. There will be a range of sponsorship opportunities available for this event.

For further information, kindly contact:

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Society of Petroleum Engineers
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Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia
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E-mail: jvaldes@spe.org • Web Site: www.spe.org/atws

General Information about Miri, Sarawak, Malaysia

Sarawak is the largest states of the 13 states in Malaysia and it is located on the North Western shore of Borneo island.

Miri is the northern tourism gateway to Sarawak and the ideal jumping-off point for three of Sarawak's world famous national parks – Niah Cave, Mulu Cave and Lambir Hills.

TRANSPORTATION

- Malaysia Airlines and Air Asia operate daily flights between Kuala Lumpur and Miri. Flight duration is approximately 2.5 hours from Kuala Lumpur International Airport (KLIA).

PASSPORT AND VISAS INFORMATION

- Visitors to Malaysia must be in possession of passports valid for at least six (6) months with proof of onward passage, either return or through tickets. Visa requirements depend on country of origin and last destinations before entering Malaysia. Please check with your travel agent or airline before your departure.
- Information on visa applications are available at <http://www.kln.gov.my/>.

CURRENCY

- The national monetary unit is RINGGIT MALAYSIA (RM). US\$1.00 is approximately RM3.3. Foreign currency can be exchanged at the airport, local banks and hotels. 1 Ringgit equals 100 Cents.
- Money and travelers cheques can be exchanged at banks and money changers. Major credit cards are accepted in hotels and department stores. Cash however, is required in the local markets.

LANGUAGE

- The official language of Malaysia is Bahasa Malaysia. English is however widely used in business, so communication is relatively easy.

CLIMATE

- Hot and humid all year. Temperature ranges from 25°C to 33°C.

TIME

- Miri is 8 hours ahead of GMT and 16 hours ahead of US Pacific Standard Time. The time zone is the same as Perth, Singapore, Kuala Lumpur, Beijing, Hong Kong and Taipei.

ELECTRICITY

- 220--240 volts with 50 cycles AC are available.

DRESS CODE

- Casual/smart clothing is recommended. The Workshop atmosphere is informal.

Documentation:

1. Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers.
2. Work in progress, new ideas, and interesting projects are sought.
3. Professionally-prepared visual aids are not required; handwritten viewgraphs are entirely acceptable.
4. Note-taking by participants is encouraged. However, to ensure free and open discussions, no formal records will be kept.

Workshop Deliverables:

- The committee will prepare a full report containing the highlights of the Workshop discussions. This report will be circulated to all attendees. A one-page summary will be prepared by the Workshop Co-Chairperson, which will be posted on the SPE Web Site, and published in the Journal of Petroleum Technology (JPT), if space permits. The copyright of the Summary Report will belong to SPE.
- PowerPoint presentation materials will be posted on a specific SPE URL address after the Workshop. Provision of the materials by the discussion leaders will signify their permission for SPE to do so.

Commercialism:

In keeping with ATW objectives and the SPE mission, excessive commercialism in posters or presentations will not be permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the presenter and others involved in the work.

Attendance Certificate:

All attendees will receive an attendance certificate attesting to their participation in the Workshop. This certificate will be provided in exchange for a completed Workshop Questionnaire.

Continuing Education Units:

This workshop qualifies for SPE Continuing Education Units (CEU) at the rate of 0.1 CEU per hour of the ATW.

Attendees' Information:

General and detailed accommodation information will be forwarded to registrants with the attendee package prior to the scheduled Workshop, in June 2010.

Transportation/Visa:

All delegates are advised to book their international airline tickets early from their country to Miri, Sarawak, Malaysia. Further detailed transportation information will be available and included in the attendee package upon registration. All travelers to Malaysia must be in possession of passport valid for at least six (6) months with proof of onward passage, either return or through tickets. Please check with your travel agent for information on visa requirements to Malaysia.

Dress Code:

Casual clothing is recommended. The Workshop atmosphere is informal.

Workshop Venue:**Miri Marriott Resort & Spa**

Jalan Temenggong Datuk Oyong Lawai
P.O. Box 1145
98008 Miri, Sarawak
Malaysia
Tel: 60.85. 421.121 • Fax:60.85.402.855
Website : <http://www.marriott.com>

REGISTRATION FEES:**RESIDENTIAL****Early Bird Registration Deadline: 25 May 2010**

- **SPE MEMBER : RM 7,425.00 (US\$2,250.00)/person on/before 25 May 2010**
- **NONMEMBER : RM 7,755.00 (US\$2,350.00)/person on/before 25 May 2010**

RESIDENTIAL**Registration Deadline: 25 June 2010**

- **SPE MEMBER : RM 7,755.00 (US\$2,350.00)/person on/before 25 May 2010**
- **NONMEMBER : RM 8,085.00 (US\$2,450.00)/person on/before 25 May 2010**

Fee includes the following:

- Three-day registration fee for all Workshop sessions;
- Three nights accommodation based on single occupancy with arrival Sunday, 25 July 2010 and departure Wednesday, 28 July 2010;
- Welcome reception followed by dinner (Sunday evening);
- Three meals per day except on Wednesday;
- Daily coffee/tea breaks;
- Workshop Workbook and Certificate of Continuing Education Units (CEU);

Note: Registration fee does not include hotel accommodation and meal costs for additional family member(s).

NON-RESIDENTIAL**Early Bird Registration Deadline: 25 May 2010**

- **SPE MEMBER : RM 6,435.00 (US\$1,950.00)/person on/before 25 May 2010**
- **NONMEMBER : RM 6,765.00 (US\$2,050.00)/person on/before 25 May 2010**

NON-RESIDENTIAL**Registration Deadline: 25 June 2010**

- **SPE MEMBER : RM 6,765.00 (US\$2,050.00)/person on/before 25 May 2010**
- **NONMEMBER : RM 7,095.00 (US\$2,150.00)/person on/before 25 May 2010**

Fee includes the following:

- Three-day registration fee for all Workshop sessions;
- Welcome reception followed by dinner (Sunday evening);
- Two meals per day except on Wednesday;
- Daily coffee/tea breaks;
- Workshop Workbook and Certificate of Continuing Education Units (CEU).

Registration Policy:

- Registration fee **MUST** be paid in advance for attending the Applied Technology Workshop.
- Full Fixed fee is charged regardless of the length of time that the registrant attends the Workshop.
- Fixed fee cannot be prorated or reduced for anyone (Workshop chairpersons, committee members, speakers, discussion leaders, students and registrants).
- Attendees are expected to attend all Workshop sessions and are not permitted to attend on a partial basis.

Cancellation & Refund Policy:

- A full refund less **US\$150.00** will be charged for cancellation received before the registration deadline **25 June 2010**.
- For cancellation received after the registration deadline **25 June 2010**, a 25% refund will be made to the registrant.
- No refund on cancellation received seven (7) days prior to the starting of the Workshop date, on or after **18 July 2010**.
- Substitutions will not be accepted without prior Programme Committee approval.
- **No refund** will be issued, if a registrant fails to show up at the Workshop on-site.